Build up trust in time series prediction by using Explainable AI
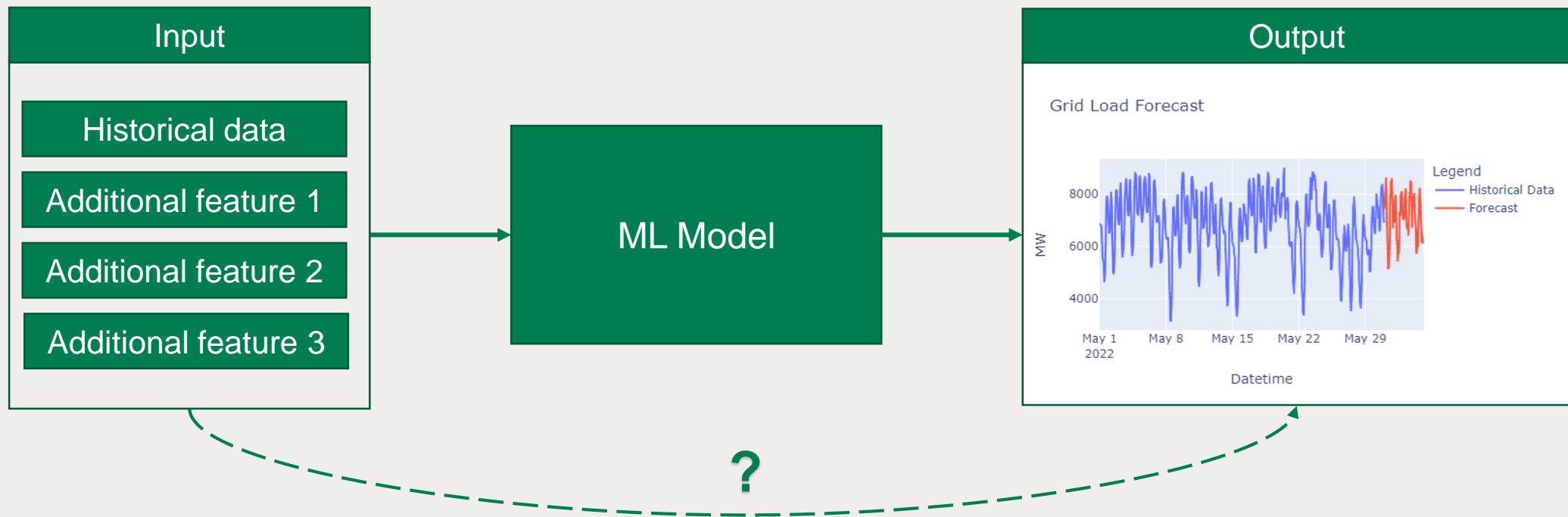
D2-PS1-1.2

Are there any restrictions on applying "black box" machine learning-
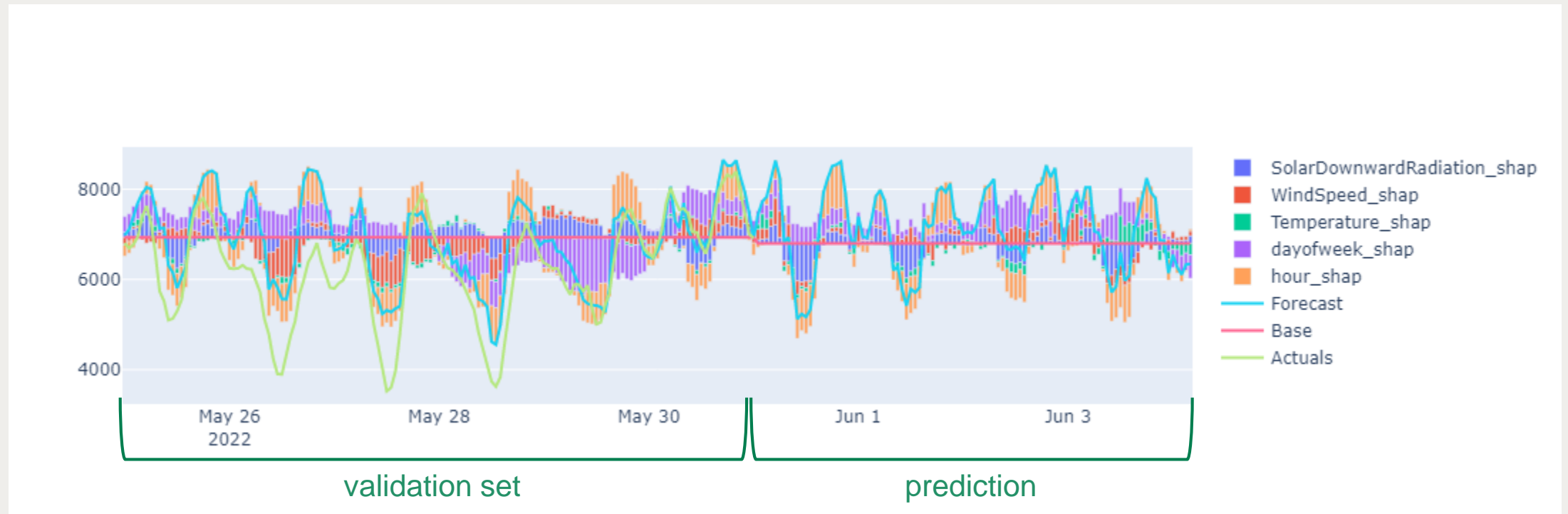based software for critical infrastructures like power industry?

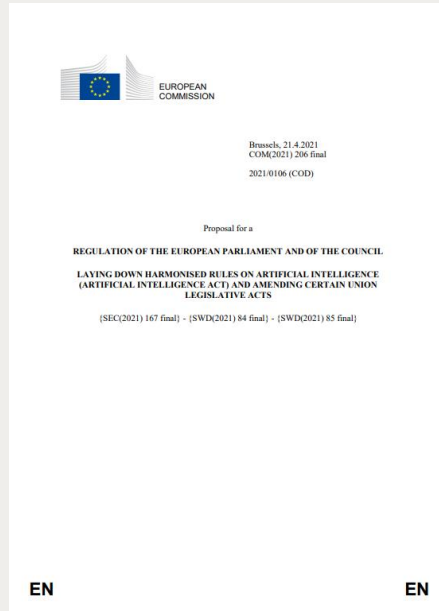**Christian Merz – Germany/Belgium**

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Time series ML models are often a black box and can not explain the impact of each feature on the predicted output.

SHAP values show the impact of each input value for every ML model on the final prediction.

Explainable AI will become key for critical infrastructure operators due to upcoming EU AI regulation.

- Proposal published April 4th, 2021 by European Commission

- Based on a risk-based approach

- New legal requirements will apply to system critical infrastructure operators (Chapter 2)

> High-risk AI systems shall ensure that the **system's output is sufficiently transparent** to enable users to interpret the results *(responsibility for transparency)* as well as providing an **appropriate human-machine interface tool** to oversee the AI system during its operations *(human oversight)*.

EC – COM(2021), Chapter 2 Article 13 No. 1
EC – COM(2021), Chapter 2 Article 14 No. 1

Thank you for your attention.

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Group Discussion Meeting